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Rediscovery of *Haplothismia exannulata* Airy Shaw (Burmanniaceae) from its type locality

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Abstract

Haplothismia exannulata Airy Shaw, an unique species of the monotypic genus of the tribe Haplothismieae is rediscovered after an imbroglio on its existence. Detailed description and illustrations are provided based on recent collections.

INTRODUCTION

Haplothismia exannulata Airy Shaw remained unnoticed in spite of several attempts made by botanists to relocate it from its type locality. The plant was first collected by Prof. A. Abraham and Mr. K.C. Jacob, University College, Trivandrum during October 1951. After the type collection, Sebastine and Ramamurthy (1966) studied the flora of Parambikulam - Aliyar project area during 1962-63 and they could not locate this taxon and reported that "further collection from this region is impossible as the area is going under water" due to the construction of Parambikulam dam. Vajravelu (1990) also did not come across this species during his study on the flora of Palghat district. As all the previous attempts to relocate *H. exannulata* were unsuccessful, Nayar (1997) assigned the status 'Extinct' to this taxon. During our study on the flora of Parambikulam Wildlife Sanctuary, this interesting species was recollected from two restricted localities. The present discovery is significant in the context of conservation as the collection localities belong to areas under protection.

Two tribes were recognised by Jonker (1938) in the family Burmanniaceae. The floral structure of *Haplothismia* Airy Shaw is unique and least specialized than that of the genera in the tribes Thismieae and Burmannieae. Because of the distinctive characters of *Haplothismia* such as uniseriate perianth, absence of annulus, six stamens with long recurved filaments which are attached inside the perianth tube, longitudinally dehiscing anther and short style, a new tribe Haplothismieae was proposed by Airy Shaw in 1952. *Haplothismia* is the monotypic genus in the tribe Haplothismieae.

The morphological features of the recently collected specimens, especially that of the style, stigma and limb of perianth tube show slight difference from that mentioned in the

description contained in the protologue provided by Airy Shaw (1952). Illustrations do not show the alternating teeth like projections and small papillate structures on either side of the stamen at the mouth of the perianth-hypanthial tube; and all these could be due to the delicate nature of the preserved specimens. This paper provides detailed description and illustrations based on recent collections, which helps to locate this endangered plant in other localities.

Haplothismia exannulata Airy Shaw, Kew Bull. 2: 277. 1952. (Fig. 1).

Annual saprophytic herbs. Stem 7-15 cm long, slender, simple or branched, muddy brown coloured. Roots tuberous, clustered, up to 3.5 cm long, thickened towards the apex. Leaves reduced to scales, many, more or less sheathing the stem, distichous, membranous, lower ones smaller and glabrous, *c.* 0.5 x 0.4 cm, ovate, upper ones to 1.2 x 0.5 cm, puberulous, spathaceous, membranous. Inflorescence pseudo-recemose, puberulous, 2-6-flowered; pedicels 4-5.5 cm long, from the axils of upper scales. Flower 1.5 cm long, perianth tube infundibular, base adnate to the ovary, 1 cm across at mouth, free at apex, limbs uniseriate up to 0.7 cm, persistent. Stamens 6, opposite to the perianth segments; filaments basally attached to the perianth-hypanthium tube and free at apex, 1-1.5 mm long, incurved towards the base of the flower, alternate with teeth-like projections and small ciliate structures on either side; anthers 1 mm, pendulous, ovate, basifixed, extrorse. Ovary 0.5 cm, inferior, obovate, unilocular; ovules numerous, anatropous, placentae three, parietal; style very short, *c.* 2 mm long; stigma trilobed, papillate, 4 mm long, base of the lobes slightly upcurved. Fruit a capsule, loculicidal; seeds many, dark brown.

Flowering and fruiting: October

Distribution: So far reported only from the type locality, Parambikulam Wildlife Sanctuary in Kerala.

Ecology: This saprophytic species grows in humus rich soil in the evergreen forests at an altitude of about 700 m. during the end of north-east monsoon. A fungus (*Ramaria* sp.) is often found associated with *Haplothismia*. Life span of this ephemeral is directly influenced by the moisture regime of the soil. Due to the peculiar colour of the plant it can hardly be distinguished from its surroundings. Trees associated are *Otonephelium stipulaceum* (Bedd.) Radlk., *Knema attenuata* (Hook. f. & Thoms.) Warb, *Vateria indica* L., *Orophea uniflora* Hook. f. & Thoms., *Paracroton pendulus* (Hassk.) Miq. subsp. *zeylanicus* (Thw.) Balakr. & Chakrab., *Drypetes oblongifolia* (Bedd.) Airy Shaw and *Cleidion javanicum* Bl.

Specimens examined: India, Kerala, Parambikulam Wildlife Sanctuary, Vengoli, 16 October 2000, *Sujanapal KFRI 30387* (KFRI); *Ibid.*, 19 October 2000, *Sasidharan & Sujanapal KFRI 30476* (KFRI).

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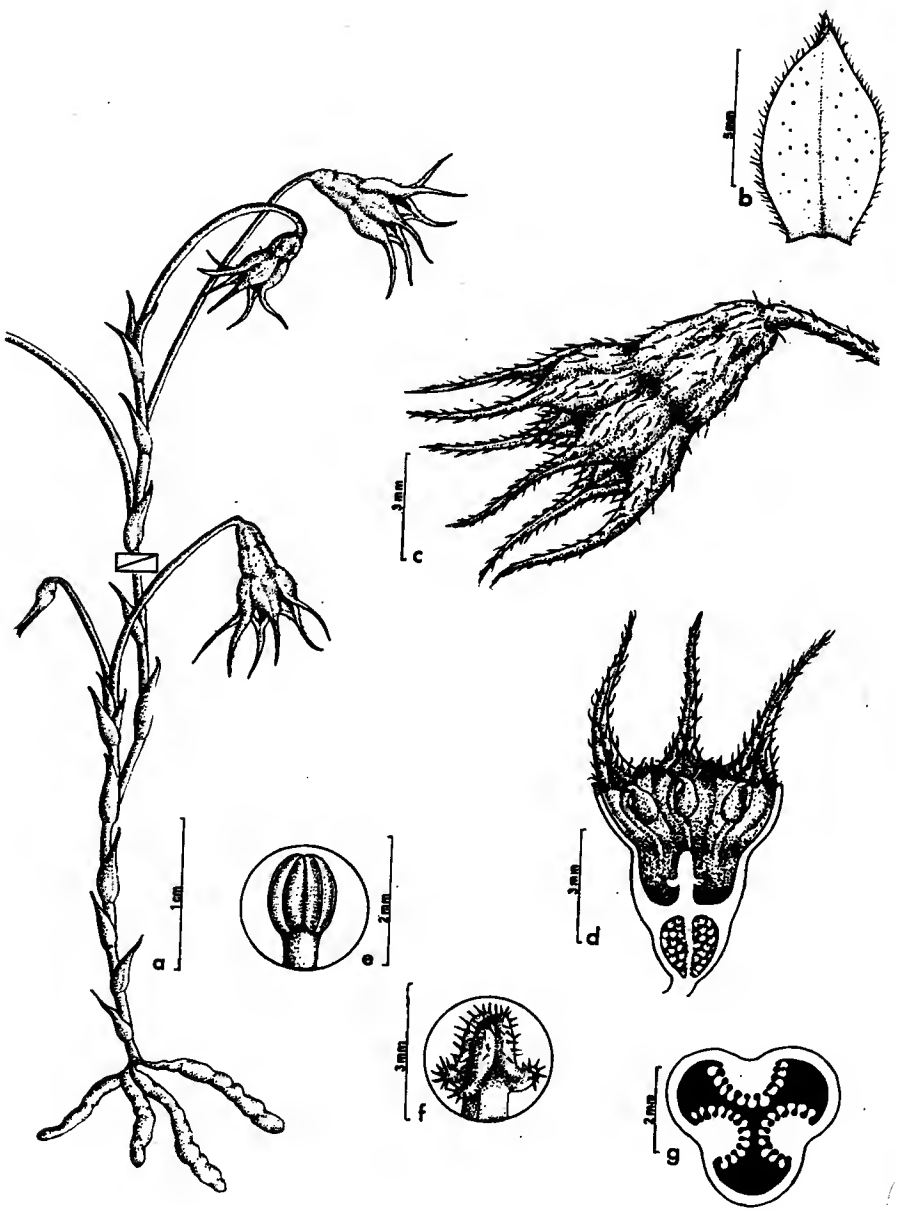

Fig. 1. *Haplothismia exannulata* Airy Shaw: a. Habit; b. Scale; c. Single flower; d. Longitudinal section of flower; e. Anther; f. Stigma; g. Cross section of ovary.

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